State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 3, 2000

CERTIFIED RETURN RECEIPT
P 074 976 824

Robert Steele
Robert Steele - J-W Dansie Company
1055 North 400 East
Nephi, Utah 84648

Re: Initial Review of Notice of Intention to Commence Large Mining Operations, Robert Steele, J-W Dansie Company, Levan Gypsum-Juab Gypsum Mine, M/023/016, Juab County, Utah

Dear Mr. Steele:

The Division has completed its initial review of your draft Notice of Intention to Commence Large Mining Operations (LMO) for the Levan Gypsum mine, located in Juab County, Utah. We have identified a number of deficiencies in your notice which will need to be resolved before we can complete our review and grant approval of the permit application. The technical review document is attached to this letter. The comments are identified under the applicable Minerals Rule heading and follow the format of the Large Mining Permit Application Form. Please format your response in a similar fashion.

Please provide a response to the attached technical deficiencies within 60 days of your receipt of this review. The Division will suspend further review of the LMO until your response to this letter is received. If you have any questions in this regard please contact me, Tony Gallegos, Lynn Kunzler, Tom Munson or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
cc: Will Wilson, U.S. Forest Service
Mary Ann Wright, DOGM
Tom Munson, DOGM
o:\m023016.ltr cc: Tony Christofferson, Geneva Rock

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Bob Steele J-W-Dansie Company
Levan Gypsum-Juab Mine

M/023/016
April 3, 2000

II. Rule R647-4-105 - Maps, Drawings & Photographs

105.1 - Base Map

A complete and correct topographic base map (or maps) with appropriate contour intervals must be submitted with this notice showing all of the items on the following checklist. The scale should be approximately 1 inch = 2,000 feet (preferably a USGS 7.5 minute series or equivalent topographic map where available). The map(s) must show the location of lands to be affected in sufficient detail to allow measurement of the proposed area of surface disturbance.

The topographic maps submitted with the application have no scale and no legend and, therefore, do not provide accurate information. Acreages cannot be verified. Since no color coded legend has been supplied, the maps are not clearly labeled to show what is disturbed and what will be reclaimed. Please resubmit the maps with accurate scale and legend. You can photocopy maps to enlarge them but you need to photocopy the scale as well. The color coding needs to be described in a legend. (TM)

Base Map Checklist

Please check off each section to verify these features are included on the map(s) or explain why it is not applicable. Please add the map identification name or number which shows these features.

Check Map ID

(a) Property boundaries of surface ownership of all lands which are to be affected by the mining operations;

Map # 2 is adequate to show property boundaries but does not include a legend, although it is assumed the area outlined in red is the correct area of ownership. Please differentiate between Private, State, and Federal lands. All lands affected by this operation needs to be shown. (TM)

(b) Proposed route of access to the mining operations from nearest publicly maintained highway (Map scale appropriate to show access);

No access route is highlighted on this map. Please provide this information. (TM)

(c) Areas proposed to be disturbed or reclaimed over the life of the project or other suitable time period.

It is impossible to verify which areas are to be disturbed or reclaimed by the color coding on Map #3. Please specifically identify which areas are disturbed by mining and what areas are to be reclaimed at the close of the mine life. These areas must correspond with the acreages provided in the mine plan. (TM)

105.2 - Surface Facilities Map

Surface Facilities Map Checklist

Surface facilities maps should be provided at a scale of not less than 1" = 500'.

Please check off each section to verify these features are included on the map(s) or **explain why it is not applicable.** Please add the map identification name or number which shows these features.

Map ID

(a) Proposed surface facilities, including but not limited to: buildings, stationary mining/processing equipment, **roads**, utilities, power lines, **proposed drainage control structures(i.e. berms, culverts, etc., and the location of topsoil storage areas, overburden/waste dumps,** tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes, and wastewater discharge treatment and containment facilities;

*We ask that the above **bolded** items be shown and labeled on a map as well as described in the plan. Also show any of the other listed items that may pertain to your operation. (TM)*

(b) A border **clearly outlining** the extent of the surface area proposed to be affected by mining operations, and the number of acres proposed to be affected;

This border is not clear and, as such, needs to be provided on all applicable maps. (TM)

105.3 - Additional Maps

Please provide a map which shows land ownership. (TM)

Reclamation Treatments Map Checklist

Please check off each section to verity these features are included on the map(s) or explain why it is not applicable. Please add the map identification name or number which shows these features.

Check Map ID

(a) **Areas of the site to receive various reclamation treatments shaded, cross hatched or color coded to identify which reclamation treatments will be applied.** Areas would include: **buildings, stationary mining/processing equipment, roads, utilities, proposed drainage improvements or reconstruction, and sediment control structures, topsoil storage areas, waste dumps,** tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes, ponds, and wastewater discharge, treatment and containment facilities. **Reclamation**

treatments may include ripping, regrading, replacing soil, fertilizing, mulching, broadcast seeding, drill seeding, and hydroseeding:

Some of this information is talked about in the plan, but the location of the specific treatment is not provided on the reclamation treatments map, since no legend accompanies any of the maps. The maps included in the submittal fail to show exactly what roads, pits, and pads will be reclaimed and where the treatments identified in the plan will be used. (TM)

(b) A border clearly outlining the extent of the area to be reclaimed after mining, the number of acres disturbed, and the number of acres proposed for reclamation:

This information is not supplied. (TM)

(c) Areas disturbed by this operation which are included in a request for a variance from the reclamation standards:

Areas for which you are applying for a variance need to be shown on a map. (TM)

(d) Highwalls which are proposed to remain steeper than 45 degrees and slopes which are proposed to remain steeper than 3 horizontal : 1 vertical.

A variance request is needed for any highwalls steeper than 45 degrees. Please identify all slope configurations and approximate location following reclamation. (TM)

Note: Areas included in sections c & d will need to be referenced in the variance request section. Please shade or color code these areas on this map.

Additional maps and cross sections may be required in accordance with Rule R647-4-105.3.

Please provide cross-sections showing impacted areas following mining and ground contours after recontouring. (TM)

III. Rule R647-4-106 - Operation Plan

106.2 - Type of Operation Conducted:

Describe the typical methods and procedures to be used in mining operations, on-site processing and concurrent reclamation. Include equipment descriptions where appropriate.

Please discuss the mining methodology and the equipment to be used. (TM)

106.3 - Estimated Acreage

Acreage listed here should match areas measured off the maps provided.

The maps do not provide an accurate scale or legend so any of the acreage numbers in this plan can be verified. Please modify the maps accordingly to include this information. (TM)

106.4 - Nature of material including waste rock/overburden and estimated tonnage

Describe the typical annual amount of the ore and waste rock/overburden to be generated, in cubic yards. Where does the waste material originate? What is the nature of the overburden/wastes (general chemistry/mineralogy and description of geologic origin)? Will it be in the form of fines or coarse material? What are the typical particle size and size fractions of the waste rock?

Thickness of overburden:	_____ ft.
Thickness of mineral deposit:	_____ ft.
Estimated annual volume of overburden:	_____ cu. yds.
Estimated annual volume of tailings/reject materials:	_____ cu. yds.
Estimated annual volume of ore mined:	_____ cu. yds.
Overburden/waste description: _____	

These items need to be addressed for the purposes of preparing the surety estimate. Each item should be addressed to assure that the funds allotted in the reclamation estimate are correct. (DJ)

106.5 - Existing soil types, location of plant growth material

Specific information on existing soils to be disturbed by mining will be required. General soils information may not be sufficient.

Provide specific descriptions of the existing soil resources found in the area. Soil types should be identified along with depth and extent, especially those to be directly impacted by mining.

Soils - The plan shall include an order 3 Soil Survey (or similar) and map. This information is needed to determine which soils are suitable for stockpiling for revegetation. This soil data may be available from the local Natural Resources Conservation Service office, or if on public lands, from the land management agency. The map needs to be of such scale that soil types can be accurately determined on the ground (see Attachment I).

Each soil type to be disturbed needs to be field analyzed for the following:

Depth of soil material	_____inches
Volume (for stockpiling)	_____ cu. yds.
Texture (field determination	_____

A sample of each soil type(and any proposed substitute soil materials) needs to be taken and sent to a soils lab for analysis. Soil samples sent to the laboratory for analysis need to be about one quart in size, properly labeled, and in plastic bags. Soil sample locations need to be shown on the soils map. Laboratory analysis for the soil samples should include: texture, pH, Ec (conductivity), CEC (Cation Exchange Capacity), SAR, % Organic Matter, Total N, Available Phosphorus (as P_2O_5), and Potassium (as K_2O). (LK)

106.6 - Plan for protecting and redepositing existing soils

Describe how topsoil or subsoil material will be removed, stockpiled and protected.

Six (*6) inches of topsoil salvaged from eight (8) acres of potential disturbance equates to approximately 6,450 cubic yards, not the 1,000 identified in the NOI for stockpiling. Please describe how the stockpile(s) will be protected from further impact until used for reclamation. At a minimum, topsoil stockpiles should be seeded with appropriate seedmix, fenced or signed. Please show the locations of all topsoil stockpiles on the soils map. It is expected that at least six (6) inches of soil material will be respread for reclamation. A final determination as to the thickness and amendments that may be necessary cannot be made until the soil analysis requested under R647-4-106.5 are received. (LK)*

106.7 - Existing vegetative communities to establish revegetation success

The reported vegetation ground cover appears to be quite low for the vegetation type reported. The Division will need to verify the percent ground cover during the next field season. The reclamation success standard will be adjusted as necessary based on the result of the Division's field verification. (LK)

106.8 - Depth to groundwater, overburden material & geologic setting

Describe the approximate depth to groundwater in the vicinity of the operation based on the completion of any monitoring or water wells in the area. Please show the location of these wells on the base map.

Depth to groundwater 600? ft.

Provide a narrative description of the geology of the area and/or a geologic cross section.

This has been addressed by stating that groundwater is 600 feet deep in the area. It is important to note as well that there is a perennial stream within 100 feet of the lower pad. Please correct the information submitted here to reflect the presence of the perennial stream indicating a surface and groundwater resource within close proximity. (TM)

106.9 - Location and size of ore and waste stockpiles, tailings and treatment ponds, and discharges

Describe the location and size of any proposed waste/overburden dumps, stockpiles, tailings facilities and water storage or treatment ponds.

Size and location of ore and waste stockpiles should be noted on the Surface Facilities map. (TM)

Describe how overburden material will be removed and stockpiled.

The response to this question was "no overburden would be generated." This conflicts with the previous statement that 200 cu. yds./ year would be the estimated annual volume. Please clarify and identify where this overburden will be stockpiled. (TM)

Describe how tailings, waste rock, rejected materials, etc. will be disposed of.

This question was answered "none." The Division would like to know what the stockpile pad was built from and what the operator thinks this material is. It may be that this material will stay in place and be reclaimed and this would be the more appropriate response. (TM)

Describe the acreage and capacity of waste dumps, tailings ponds and water storage ponds to be constructed. All impoundments must include the necessary hydrologic calculations to determine if they are adequately sized to handle storm events.

No impoundments are found onsite or are proposed. (TM)

Describe any proposed effluent discharge points (UPDES) and show their location on the surface facilities map. Give the proposed discharge rate and expected water quality. Attach chemical analyses of such discharge if available.

No discharge is going to occur, therefore no permit is required. (TM)

IV. R647-4-107 - Operation Practices

During operations, the operator shall conform to the practices listed under this section of the Minerals Rules unless the Division grants a variance in writing.

Describe measures taken to minimize hazards to public safety during mining operations regarding: the construction of berms, fences or barriers above highwalls or other excavations.

The plan describes berms being placed around stockpiles and on all roads to mine. It does not mention berms around highwalls . Please clarify your intent regarding highwalls safety concerns. (TM)

Describe measures taken to avoid or minimize environmental damages to natural drainage channels which will be affected by this mining operation.

The current map shows a drainage cutting across the road in several locations and the head of this drainage being the pit itself. Please explain why this ephemeral drainage will not be affected and what, if any, measures will be taken to protect it (i.e. culverts, no material cascaded into the drainage, berms etc.). (TM)

VI. Rule R647-109 - Impact Statement

109.1 - Surface and groundwater systems

Describe impacts to surface or groundwater which could be caused by this mining operation. Describe how these impacts will be monitored and mitigated. The appropriate groundwater and storm water control permits need to be obtained from the Division of Water Quality. Please reference any such permits.

Since your response was "none," please supply us with the letter or letters, stating that no permits are required. If you have not contacted the appropriate agencies the following phone number is supplied: (Groundwater Permits or Storm water Permits contact the Division of Water Quality at 538-6146). (TM)

109.2 - Wildlife habitat and endangered species

Describe the impacts on wildlife habitat associated with this operation. Describe any impacts to big game species found in the area. Describe any impacts to riparian areas. Describe any impacts this operation will have on waterfowl (fly-over, temporary resident or permanent resident). List any threatened or endangered wildlife species found in the area. Describe impacts to threatened or endangered species and their habitats. Describe measures to be taken to minimize or mitigate any impacts to wildlife or endangered species.

The Forest Service or the Utah Division of Wildlife Resources in Springville, Utah should be able to provide you with general information regarding wildlife resources within the project area. At this time, the Division concurs that impacts to wildlife or threatened and endangered species will not be significant. (LK)

109.3 - Existing soil and plant resources

Impact to soil and plant resources will occur at the site. Vegetation will be lost until the site is reclaimed. Soils will lose productivity while in stockpiles. These impacts will be mitigated by salvage of all available topsoil and stockpiling these materials for use in reclamation. Soil materials may need to be amended to successfully revegetate the site. The loss of vegetation will be mitigated by final reclamation of the site and meeting the revegetation success standard. Impacts to threatened or endangered plant species are unlikely.

109.4 - Slope stability, erosion control, air quality, public health & safety

Describe the impacts this mining operation will have on slope stability, erosion, air quality, public health and safety. Include descriptions of highwall and slope configurations and their stability. Air quality permits from the state Division of Air Quality may be required for mining operations. Please reference any such permits. Describe measures to be taken to minimize or mitigate impacts to slope stability, erosion, air quality, or public health and safety. The statement was made that an air quality permit will be obtained if required.

Please provide the documentation that no air quality permit is required . Air Quality can be contacted at the Utah Department of Environmental Quality, the Division Of Air Quality 801-536-4000. (TM)

VII. Rule R647-4-110 - RECLAMATION PLAN

110.2 - Reclamation of roads, highwalls, slopes, leach pads, dumps, etc.

Describe how the following features will be reclaimed: roads, highwalls, slopes, impoundments, drainages and natural drainage patterns, pits, ponds, dumps, shafts, adits, drill holes and leach pads. Describe the configuration of these features will look like after final reclamation.

Reclamation of the ore stockpile area should be addressed in the plan. (TM)

Describe how roads will be reclaimed. Road reclamation may include: regrading cut and fill sections, ripping the road surface with a dozer, topsoil replacement, construction of water bars, construction of traffic control berms or ditches, and reseeding.

Describe how highwalls will be reclaimed. Highwall reclamation may include: drilling and blasting, backfilling, regrading, topsoil replacement, and reseeding.

The plan does not describe how the highwalls will be recontoured to a 1 to 1 slope. (TM)

Describe how slopes will be reclaimed. Slope reclamation may include: regrading to a 3 horizontal : 1 vertical (3h:1v) configuration, topsoil replacement, contour ripping, pitting, and reseeding.

The response given states that "roads will be recontoured with a trackhoe and reseeded and mine sites will be recontoured with slopes left at a 1:1 slope. Also topsoil will be redistributed and seeded." No amounts of topsoil are given, so please provide a depth of topsoil to be redistributed over the disturbed areas. The length and width of the mine access road is also needed to calculate reclamation costs. (TM)

Describe how drainages will be reclaimed. Drainage reclamation would include: the reestablishment of a natural drainage pattern which fits in with the upstream and downstream cross-section of existing drainage in the vicinity of the disturbance; the reestablishment of a stable channel in the reclaimed reach of channel, using the necessary armoring to prevent excessive erosion and downstream sedimentation.

Where the road crosses the drainage please provide drainage configuration that allows the drainage to flow across the reclaimed road without causing a washout. (TM)

Describe how waste dumps will be reclaimed. Waste dump reclamation may include regrading to a 3h:1v configuration, topsoil replacement, mulch or biosolids applications, contour ripping or pitting, and reseeding. Characterization of the physical and chemical nature of the waste dump materials should be provided.

This characterization is not supplied. Please supply the necessary information. (TM)

NOTE: The Minerals Rules require overall highwall angles of no more than 45° at final reclamation unless a variance is granted. All dump or fill slopes should be left at an angle of 3h:1v or less. Any slopes steeper than 3h:1v must be reclaimed using state-of-the-art surface stabilization technology. Pit benches exceeding 35 feet in width should be topsoiled, or covered with fines, and revegetated.

Describe the final disposition of any stockpiled materials on site at the time of final reclamation.

Will the overburden waste be stockpiled? (TM)

110.5 Revegetation planting program

Please provide details of the revegetation plan, including soil replacement, amendments, seedbed preparation, seed mix to be used (include species and rate per acre), seeding methods, and timing. A minimum of one (1) foot of soil material (overburden, fines, and topsoil) need to be replaced. It is likely that the soil materials will need to be amended with 5 - 10 ton per acre of composted manure (final rate cannot be determined until results of the soil analysis requested under R647-4-106.5 and 107.5 are submitted). Areas of compaction need to be ripped. The final surface should be left in a rough condition. Timing of reclamation should be done so that the area is ready for seeding in late October. Given the relatively small size of this operation, broadcast seeding is probably the most likely seeding method to be used. (LK)

Describe the revegetation tasks to be performed in detail. For example, will ripping, mulching, fertilizing, seeding and scarifying of these areas be performed and, if so, how will this be accomplished? Correlate this information with the Reclamation Treatments Map. (TM)

a) Soil Material Replacement

In order to reestablish the required ground cover, one to two feet (depending on underlying material) of suitable soil material usually has to be redistributed on the areas to be reseeded. If the stockpiled soil isn't sufficient for this, soil borrow areas will need to be located.

Describe the volume of soils and approximate depth of soil cover to be used in reclamation. Describe the source of these soils and provide an agronomic analysis of the soils. If soils will not be used, describe the alternative material or amendments to be applied in lieu of soils. Describe the methods to be used to transport and redistribute the soils. (LK)

b) Seed Bed Preparation

Describe how the seedbed will be prepared and equipment to be used.

The Division recommends ripping or discing to a minimum of 12 inches and leaving the seed bed surface in as roughened condition as possible to enhance water harvesting, erosion control and revegetation

success. Compacted surfaces such as roads and pads should be deep ripped a minimum of 18 inches. (LK)

c) Seed Mixture - List the species to be seeded:

Provide a seed mix listing adaptable plant species and the rate of seeding that will be used at the site for reclamation. Seed mix(es) should contain 12-15 different species, including grasses, forbs and shrubs. More than one seed mix may be needed, depending upon the areas to be reclaimed. Keep the proposed post-mining land use in mind when developing seed mixes.

Example

Species Name	Common Name	Seeding Rate (lbs Pure Live Seed/Acre)

Total lbs/acre _____

The Division can provide assistance in developing reclamation seed mixes (if requested).

d) Seeding Method

Describe method of planting the seed.

Will seed be drilled, hydroseeded, or broadcast? (LK)

e) Fertilization

Describe fertilization method, type(s) and application rate (if needed).

Usually, the only fertilizer or amendment that is needed is composted manure or biosolids at a rate of 5-10 tons per acre. The actual rate will be determined based on the soil analysis of the materials that will be used for reclamation. (LK)

f) Other Revegetation Procedures

Please describe any other reclamation procedures, such as shrub/tree transplants, mulching, irrigation, etc., that may be planned for reclamation of this minesite. (LK)

VIII. Rule R647-4-112 VARIANCE

The operator may request a variance from Rules R647-4-107 (Operation Practices), R647-4-108 (Hole Plugging), and R647-4-111 (Reclamation Practices) by submitting the following information:

1.11 the rule(s) which a variance is requested from; (rule number and content)

1.12 a description of the specific variance requested and a description of the area affected by the variance request; show this area on the Reclamation Treatments Map(s).

1.13 justification for the variance;

1.14 alternate methods or measures to be utilized in the variance area.

Variance requests are considered on a site-specific basis. For each variance requested, attach a narrative which addresses the four items listed above.

No variances have been requested, therefore it is assumed no highwalls will exist. Is this correct? (TM)

IX. Rule R647-4-113 - SURETY

A Reclamation surety must be provided to the Division prior to final approval of this application. In calculating this amount, include the following major tasks:

1) Clean-up and removal of structures.
2) Backfilling, grading and contouring.
3) Soil material redistribution and stabilization.
4) Revegetation (preparation, seeding, mulching).
5) Safety gates, berms, barriers, signs, etc.
6) Demolition, removal or burial of facilities/structures, regrading/ripping of facilities areas.
7) Regrading, ripping of waste dump tops and slopes.
8) Regrading/ripping stockpiles, pads and other compacted areas.
9) Ripping pit floors and access roads.
10) Drainage reconstruction.
11) Mulching, fertilizing and seeding the affected areas.
12) General site clean up and removal of trash and debris.
13) Removal/disposal of hazardous materials.
14) Equipment mobilization.
15) Supervision during reclamation.

To assist the Division in determining a reasonable surety amount, please attach a reclamation cost estimate which addresses each of the above steps. The areas and treatments included in the reclamation treatments map should correspond with items included in the reclamation cost estimate. The reclamation costs used by the Division must be third party costs.

The information supplied is insufficient for the purposes of calculating a surety bond. (DJ)
A generic bond estimation sheet is enclosed to assist the operator in completing the surety.

We acknowledge that the U.S. Forest Service presently holds a $38,000 dollar surety for the mining-related disturbances located on the federal land. Your permit application does not identify what portion of the operation is located on federal land versus privately held lands. Submission of a land and mineral ownership map encompassing the entire project area and the area immediately adjacent to the mine site is required to clarify this issue.

It is unclear if we can recognize and accept the Forest Service surety bond at this time. We presently have no claim or ability to call upon the surety held by that agency for reclamation of the mine site. The Division is not listed as a recipient or co-beneficiary on the bond. We do not have a signed Reclamation Contract agreement (FORM MR-RC) tying the $38,000 Forest Service bond to our contract form. A question remains as to how the present bond, posted by Gunnison Gypsum, Inc. (existing Forest Service permittee), is tied to your recent Large Mining permit application for this project.

Attachment I

Soil Survey and Sampling Methods

If a NRCS or land management agency soil survey is not available, the operator shall delineate all soil types that will be disturbed by mining on a map. Each soil type shall be sampled for its characteristics and inherent properties. Representative sampling locations should have similar geologic parent material, slopes, vegetative communities and aspects. The sampling locations should be representative of the soil type and be identified on the map. Sampling shall be at a minimum of one for each soil type disturbed.

The soil map needs to be of sufficient scale so that each soil type can be accurately located on the ground. (LK)